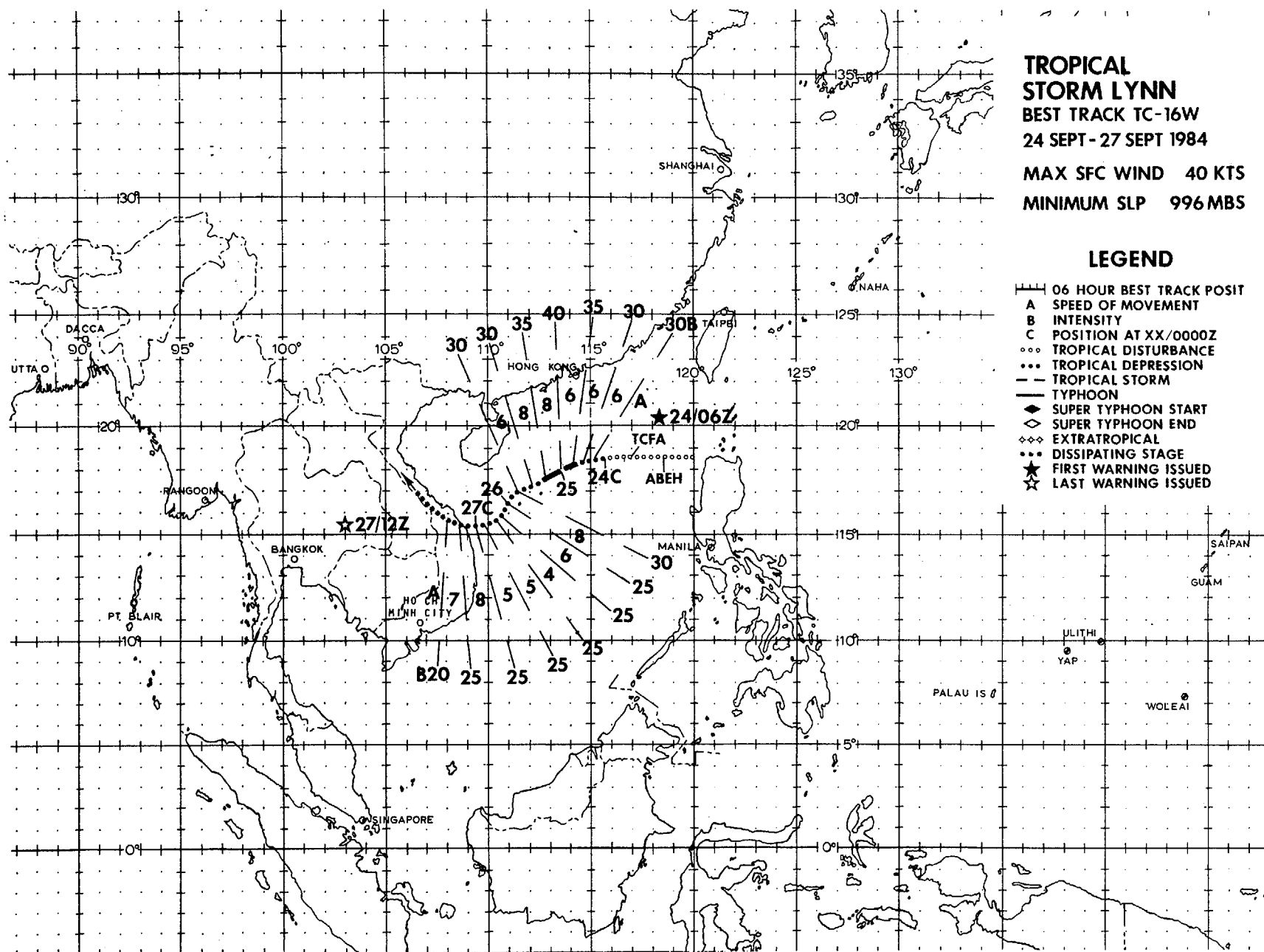


**TROPICAL  
STORM LYNN**  
BEST TRACK TC-16W  
24 SEPT - 27 SEPT 1984

MAX SFC WIND 40 KTS  
MINIMUM SLP 996 MBS

**LEGEND**

- 06 HOUR BEST TRACK POSIT
- A SPEED OF MOVEMENT
- B INTENSITY
- C POSITION AT XX/0000Z
- ... TROPICAL DISTURBANCE
- ... TROPICAL DEPRESSION
- TROPICAL STORM
- TYPHOON
- ◆ SUPER TYPHOON START
- ◇ SUPER TYPHOON END
- ◇◇ EXTRATROPICAL
- ... DISSIPATING STAGE
- ★ FIRST WARNING ISSUED
- ★ LAST WARNING ISSUED



# TROPICAL STORM LYNN (16W)

After Typhoon Ike moved inland over China early on 6 September, strong surface ridging from the subtropical ridge kept easterlies across much of the tropical Northwest Pacific. By mid-September, the ridging began to give way to the southwest monsoon. This helped set the stage for the development of Tropical Storm Lynn.

The disturbance that would eventually become Lynn was first noticed as an area of poorly organized convection near Guam on 19 September. During the following three days the area of convection moved west across the northern Philippine Sea with little development noted. The convection was apparently associated with a westward moving TUTT cell. As the TUTT cell weakened east of Luzon, divergence from an upper-level anticyclone north of Guam, which was ridging westward, maintained the convection. By the 22nd, a second upper-level anticyclone had developed just northeast of Luzon near the disturbance and the convection began to increase. During this entire time, surface synoptic data indicated only convergent easterly trades were present beneath the convection.

At 230000Z, the convection entered the South China Sea. At the same time, a lee side low-level cyclonic circulation formed in the monsoon trough just west of Luzon, apparently the result of persistent easterly flow across the mountainous terrain of northern Luzon. This provided the low-level circulation which would accelerate the development of Tropical Storm Lynn.

During the next several hours the disturbance rapidly consolidated. Ship reports indicated the surface circulation had 10 to 20 kt (5 to 10 m/s) winds with an MSLP estimated at 1003 mb. The associated convection showed a significant increase in development as it tried to organize near the low-level circulation. In addition, a cut-off low over southern China was enhancing the outflow from the anticyclone northeast of Luzon. Based on this collective information, the Significant Tropical Weather Advisory (ABEH PGTW) was reissued at 231000Z to include this disturbance as a suspect area. The potential for significant tropical cyclone development was assessed as "fair".

During the next nine hours, the tropical disturbance continued to show signs of increased organization on satellite imagery. At 231800Z, imagery indicated that a central area of intense convection had formed. Synoptic data showed the disturbance now had winds of 20 to 30 kt (10 to 15 m/s). Based on these developments a TCFA was issued at 231900Z.

The first warning on Lynn as a tropical depression was issued at 240600Z when satellite imagery indicated that the convection was moving over the low-level circulation center and intensifying. The first few warnings forecast Lynn to slowly intensify and move to the west-northwest. This forecast track was based on guidance from the One-Way Interactive Tropical

Cyclone Model (OTCM). During the next 18 hours Lynn did intensify some, reaching tropical storm strength at 241800Z and peaking at 40 kt (21 m/s) at 250000Z. After that point in time, since Lynn had been moving slowly west-southwest away from the upper-level anticyclone northeast of Luzon, it lost its upper-level outflow and entered a shearing environment. This resulted in a displacement of the convection to the north of the low-level circulation center and the start of a weakening trend (Figure 3-16-1). In addition to the shearing, the enhancement of the anticyclonic outflow by the cut-off low over southern China had now ceased as the low dissipated at about 250000Z.

At 0600Z on the 25th, it was apparent that Lynn had become a sheared system and that no further intensification would likely occur. The closest convection was located more than 120 nm (222 km) to the northeast. Lynn was now expected to follow a west-southwest track along the northern periphery of the low-level monsoon trough until it dissipated over central Vietnam. Tropical Storm Lynn posed no further forecast problems after that except for the difficulty in positioning the exposed low-level circulation center at night.

During the twenty-four hours prior to landfall, Lynn did experience a flare-up of its convection. Synoptic data at 0000Z on the 27th showed that the upper-level anticyclone had reformed near Hainan Island and that the flow over Lynn had become weak but diffluent. Also possibly contributing to this convective flare-up prior to landfall was convergence of the low-level flow and orographic lifting; both caused by the mountainous terrain inland of the Vietnam coast. After making landfall 50 nm (93 km) southeast of Da Nang (WMO 48855) Lynn turned northwest dissipating along the Vietnam/Laos border after 271800Z. There were no reports of damage or injuries from Tropical Storm Lynn.

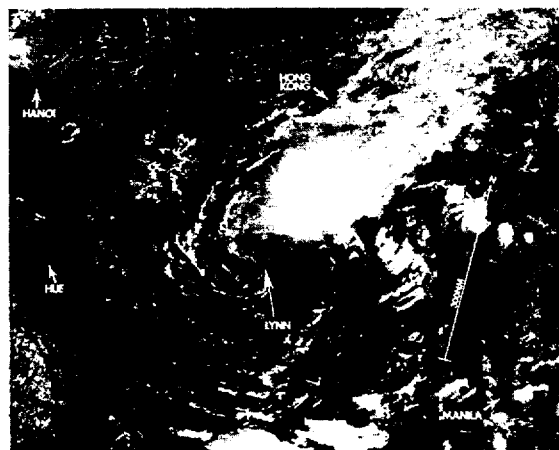


Figure 3-16-1. Tropical Storm Lynn being sheared. The exposed low-level circulation is southwest of the main convection (250223Z September DMSP visual imagery).